AIR QUALITY PERMIT

Issued To: BMP Investments Incorporated
3203 3rd Ave. North #305
Billings, MT 59101

Permit: #3179-01
Administrative Amendment (AA)
Request Received: 05/09/03
Department's Decision on AA Issued: 06/06/03
Permit Final: 06/24/03
AFS: #065-0002

An air quality permit, with conditions, is hereby granted to BMP Investments Incorporated (BMP), pursuant to Sections 75-2-204 and 211 of the Montana Code Annotated (MCA), as amended, and Administrative Rules of Montana (ARM) 17.8.740, *et seq*., as amended, for the following:

SECTION I: Permitted Facilities

A. Plant Location

BMP is located in the Bull Mountains approximately 16 miles southeast of Roundup, Montana, and approximately 35 miles northeast of Billings, Montana. The legal description of the site is Section 12, West ½ Section 13, and Section 14, Township 6 North, Range 26 East, in Musselshell County, Montana.

B. Current Permit Action

On May 9, 2003, BMP submitted a request for an administrative amendment to delay the commencement of ambient monitoring until the mine reaches a coal production level of 1.3 million tons during any rolling 12-month month period. This permitting action reflects that change. Rule citations have also been updated.

SECTION II. Conditions and Limitations

A. Emission Limitations

1. Coal production from the facility shall be limited to 1.3 million tons during any rolling 12-month time period for the development phase of the coal mining operation (ARM 17.8.749).

2. Coal production from the facility shall be limited to 4.0 million tons during any rolling 12-month time period for the primary phase of the coal mining operation (ARM 17.8.749).

3. BMP shall not cause or authorize any particulate stack emissions (total particulate), from pneumatic coal cleaning equipment, which exceed the following (ARM 17.8.340 and 40 CFR 60, Subpart Y):

a. 0.040 grams per dry standard cubic meter (0.018 grains per dry standard cubic foot); and

b. 10% opacity or greater averaged over 6 consecutive minutes.

4. BMP shall not cause or authorize to be discharged into the outdoor atmosphere from any coal processing and conveying equipment, coal storage system, or coal transfer and loading system processing coal, any emissions that exhibit an opacity of 20% percent or greater averaged over 6 consecutive minutes (ARM 17.8.340 and 40 CFR 60, Subpart Y).

5. BMP shall not cause or authorize to be discharged into the atmosphere, from any other source of process or fugitive particulate emissions, any visible emissions that exhibit an opacity of 20% or greater averaged over 6 consecutive minutes (ARM 17.8.304, ARM 17.8.308, and ARM 17.8.752).

6. Water and/or chemical dust suppressant shall be available on site and used, as necessary, to maintain compliance with the opacity limitations in Section II.A.4 and Section II.A.5 (ARM 17.8.752).

7. BMP shall use a fabric filter baghouse to control process particulate emissions from surface crushing and screening operations (ARM 17.8.752).

8. BMP shall use a fabric filter baghouse to control process particulate emissions from coal drying and cleaning operations (ARM 17.8.752).

9. BMP shall use watering and/or chemical dust suppressants and contouring techniques to control particulate emissions from the clean coal and reject stockpiles during the development phase and from the run-of-mine and clean coal product storage piles during the primary phase (ARM 17.8.752).

10. Fall distance shall be minimized during the transfer of waste material and coal to storage piles and during all transfer of material to haul trucks, material traps, hoppers, bins, and conveyors (ARM 17.8.752).

11. BMP shall employ watering and/or chemical dust suppressant, contouring, compaction techniques, and eventual covering with soil and re-vegetation to reduce emissions from waste disposal activities (ARM 17.8.752).

12. BMP shall enclose all coal and waste material conveyors. Conveyors shall be enclosed on the top and sides with a partial opening on the bottom (ARM 17.8.752).

13. BMP shall use flexible chutes, enclosures, and fabric filtration to control emissions from all coal and waste material conveying transfer points and coal loadout operations (ARM 17.8.752).

14. BMP shall utilize a stacker-reclaim (underground) system for movement of product into and out of stockpiles during the primary phase of operations (ARM 17.8.752).

15. Rejects/waste material for the primary phase shall be enclosed in a bin equipped with a hopper for haul truck loading (ARM 17.8.752).

16. BMP shall incorporate a radial stacker with an adjustable chute at the discharge end for both the clean coal and reject stockpiles during the development phase (ARM 17.8.752).

17. BMP shall incorporate a fixed stacker for both the run-of-mine (ROM) and clean coal stock piles during the primary phase of the project (ARM 17.8.752).

18. BMP shall develop, implement, and maintain good housekeeping practices to keep coal and waste material transfer locations clean (ARM 17.8.752).

19. BMP shall not cause or authorize the use of any street, road, or parking lot without taking reasonable precautions to control emissions of airborne particulate matter (ARM 17.8.308).

20. BMP shall clean up all spilled material from road surfaces (ARM 17.8.752).

21. BMP shall treat all unpaved portions of the haul roads, access roads, parking lots, or general plant area with water and/or chemical dust suppressant, as necessary, to maintain compliance with the reasonable precautions limitation in Section II.A.19 (ARM 17.8.749).

22. Total coal combustion in the facilities/office heating boiler shall be limited to 10 tons during any rolling 12-month time period during the development phase of operations (ARM 17.8.749).

23. Total coal combustion in the facilities/office heating boiler shall be limited to 300 tons during any rolling 12-month time period during the primary phase of operations (ARM 17.8.749).

24. BMP shall comply with all applicable standards and limitations, and the reporting, recordkeeping, and notification requirements contained in 40 CFR 60, Subpart Y, Standards of Performance for Coal Preparation Plants (ARM 17.8.340 and 40 CFR 60, Subpart Y).

B. Testing Requirements

1. Within 60 days after achieving the maximum production rate, but not later than 180 days after initial start-up of the development phase of the operation, the recipient shall conduct a Method 5 performance source test(s) on the coal wash plant baghouse stack to verify compliance with Section II.A.3.a (ARM 17.8.340 and 40 CFR 60, Subpart Y).

2. Within 60 days after achieving the maximum production rate, but not later than 180 days after initial start-up of the development phase of the operation, the recipient shall conduct a Method 9 performance source test(s) on the coal wash plant baghouse stack and all other affected equipment to verify compliance with Section II.A.3.b and Section II.A.4 (ARM 17.8.340 and 40 CFR 60, Subpart Y).

3. Within 60 days after achieving the maximum production rate, but not later than 180 days after initial start-up of the primary phase of the operation, the recipient shall conduct a Method 5 performance source test(s) on the coal wash plant baghouse stack to verify compliance with Section II.A.3.a. After the initial source test(s), additional testing shall occur on an every 5-year basis or according to another testing/monitoring schedule as may be approved by the Department (ARM 17.8.105, ARM 17.8.340, ARM 17.8.749, and 40 CFR 60, Subpart Y).

4. Within 60 days after achieving the maximum production rate, but not later than 180 days after initial start-up of the primary phase of the operation, the recipient shall conduct a Method 9 performance source test(s) on the coal wash plant baghouse stack and all other affected equipment to verify compliance with Section II.A.3.b and Section II.A.4. After the initial source test(s), additional testing shall occur on an every 5-year basis or according to another testing/monitoring schedule as may be approved by the Department (ARM 17.8.105, ARM 17.8.340, ARM 17.8.749, and 40 CFR 60, Subpart Y).

5. All compliance source tests shall conform to the requirements of the Montana Source Test Protocol and Procedures Manual (ARM 17.8.106).

6. The Department of Environmental Quality (Department) may require further testing (ARM 17.8.105).

C. Operational Reporting Requirements

1. BMP shall supply the Department with annual production information for all emission points, as required by the Department in the annual emission inventory request. The request will include, but is not limited to, all sources of emissions identified in the emission inventory contained in the permit analysis.

   Production information shall be gathered on a calendar-year basis and submitted to the Department by the date required in the emission inventory request. Information shall be in the units required by the Department. This information may be used to calculate operating fees, based on actual emissions from the facility, and/or to verify compliance with permit limitations (ARM 17.8.505).

2. BMP shall notify the Department of any construction or improvement project conducted pursuant to ARM 17.8.745(l), that would include a change in control equipment, stack height, stack diameter, stack flow, stack gas temperature, source location or fuel specifications, or would result in an increase in source capacity above its permitted operation or the addition of a new emission unit.

   The notice must be submitted to the Department, in writing, 10 days prior to start up or use of the proposed de minimis change, or as soon as reasonably practicable in the event of an unanticipated circumstance causing the de minimis change, and must include the information requested in ARM 17.8.745(l)(d) (ARM 17.8.745).

3. All records compiled in accordance with this permit must be maintained by BMP as a permanent business record for at least 5 years following the date of the measurement, must be available at the plant site for inspection by the Department, and must be submitted to the Department upon request (ARM 17.8.749).

4. BMP shall document, by month, the development phase coal production from the mine. By the 25th day of each month, BMP shall total the development phase coal production during the previous 12 months to verify compliance with the limitation in Section II.A.1. A written report of the compliance verification shall be submitted along with annual emission inventory (ARM 17.8.749).

5. BMP shall document, by month, the primary phase coal production from the mine. By the 25th day of each month, BMP shall total the primary phase coal production during the previous 12 months to verify compliance with the limitation in Section II.A.2. A written report of the compliance verification shall be submitted along with annual emission inventory (ARM 17.8.749).

6. BMP shall document, by month, the development phase coal combustion in the facilities/office heating boiler. By the 25th day of each month, BMP shall total the development phase coal combusted during the previous 12 months to verify compliance with the limitation in Section II.A.22. A written report of the compliance verification shall be submitted along with annual emission inventory (ARM 17.8.749).

7. BMP shall document, by month, the primary phase coal combustion in the facilities/office heating boiler. By the 25th day of each month, BMP shall total the primary phase coal combusted during the previous 12 months to verify compliance with the limitation in Section II.A.23. A written report of the compliance verification shall be submitted along with annual emission inventory (ARM 17.8.749).

D. Ambient Monitoring Requirements

Modeled impacts predicted the BMP project would consume 94% (141 $\mu g/m^3$) of the 24-hour ambient standard (150$\mu g/m^3$) and 87% (43.5 $\mu g/m3$) of the annual standard (50 $\mu g/m^3$). Based on this information and using the Department Ambient Monitoring Requirements Guidance Statement (10/09/98), the Department, assuming a medium level of confidence, will require ambient monitoring for the mine operations as proposed by BMP when the mine reaches a coal production level of 1.3 million tons during any rolling 12-month period.

BMP shall operate an ambient air quality monitoring network around the project area. The monitoring requirements are more fully described in the Monitoring Plan (Attachment 1). Exact monitoring locations must be approved by the Department prior to installation or relocation (ARM 17.8.749).

E. Notification

BMP shall provide the Department with written notification of the following dates within the specified time periods (ARM 17.8.749):

1. Commencement of construction of the initial development phase of the coal mine within 30 days after commencement of construction;

2. Actual start-up date of the development phase of the coal mine within 15 days after the actual start-up of the coal mine in the development phase;

3. Commencement of construction of the primary phase of the coal mine within 30 days after commencement of construction; and

4. Actual start-up date of the primary phase of the coal mine within 15 days after the actual start-up of the coal mine in the primary phase.

SECTION III: General Conditions

A. Inspection – BMP shall allow the Department's representatives access to the source at all reasonable times for the purpose of making inspections or surveys, collecting samples, obtaining data, auditing any monitoring equipment (CEMS, CERMS) or observing any monitoring or testing, and otherwise conducting all necessary functions related to this permit.

B. Waiver – The permit and the terms, conditions, and matters stated herein shall be deemed accepted if BMP fails to appeal as indicated below.

C. Compliance with Statutes and Regulations – Nothing in this permit shall be construed as relieving BMP of the responsibility for complying with any applicable federal or Montana statute, rule or standard, except as specifically provided in ARM 17.8.740, *et seq*. (ARM 17.8.756).

D. Enforcement – Violations of limitations, conditions and requirements contained herein may constitute grounds for permit revocation, penalties or other enforcement action as specified in Section 75-2-401, *et seq*., MCA.

E. Appeals – Any person or persons jointly or severally adversely affected by the Department's decision may request, within 15 days after the Department renders its decision, upon affidavit setting forth the grounds therefore, a hearing before the Board of Environmental Review (Board). A hearing shall be held under the provisions of the Montana Administrative Procedures Act. The Department's decision on the application is not final unless 15 days have elapsed and there is no request for a hearing under this section. The filing of a request for a hearing postpones the effective date of the Department's decision until conclusion of the hearing and issuance of a final decision by the Board.

F. Permit Inspection – As required by ARM 17.8.755, Inspection of Permit, a copy the air quality permit shall be made available for inspection by the Department at the location of the source.

G. Permit Fee – Pursuant to Section 75-2-220, MCA, as amended by the 1991 Legislature, failure to pay the annual operation fee by BMP may be grounds for revocation of this permit, as required by that section and rules adopted thereunder by the Board.

H. Construction Commencement – Construction must begin within 3 years of permit issuance and proceed with due diligence until the project is complete or the permit shall be revoked (ARM 17.8.762).

Attachment 1

AMBIENT AIR MONITORING PLAN
BMP – Investments Incorporated
Permit #3179-01

1. This ambient air monitoring plan is required by air quality Permit #3179-01, which applies to BMP Investments, Incorporated (BMP), coal mining operation south of Roundup, Montana. This monitoring plan may be modified by the Department of Environmental Quality (Department). All requirements of this plan are considered conditions of the permit.

2. BMP shall install, operate and maintain three air monitoring sites in the vicinity of the mine and facilities as described in Item 3 below. The exact locations of the monitoring sites must be approved by the Department and meet all the siting requirements contained in the Montana Quality Assurance Manual including revisions, the EPA Quality Assurance Manual including revisions, and Parts 53 and 58 of the Code of Federal Regulations, or any other requirements specified by the Department.

3. BMP may request that the Department review the ambient monitoring requirement if changes or commitments are made to reduce emissions from the facility. Any changes or commitments must be approved by the Department. The air monitoring data will be reviewed by the Department to determine if continued monitoring or additional monitoring is warranted.

4. BMP shall monitor the following parameters at the sites and frequencies described below:

AIRS # & Site Name	UTM Coordinates	Parameter	Frequency
30-065-XXXX		PM-10[1] 81102 and 85101 Wind Speed, Direction and Sigma Theta 61101,61102 and 61106	Every third day Continuous
Plant Area (Downwind) 30-065-XXXX		PM-10 (Collocated[2]) 81102 and 85101	Every sixth day
Plant Area (Upwind) 30-065-XXXX		PM-10	Every third day

[1]PM-10 = particulate matter less than 10 microns.
[2]The requirement for a collocated PM-10 sampler may be waived if the monitor operator operates a collocated PM-10 sampler at another site.

5. Data recovery for all parameters shall be at least 80 percent computed on a quarterly and annual basis. The Department may require continued monitoring if this condition is not met.

6. Any ambient air monitoring changes proposed by BMP must be approved in writing by the Department.

7. BMP shall utilize air monitoring and quality assurance procedures, which are equal to or exceed the requirements described in the Montana Quality Assurance Manual including revisions, the EPA Quality Assurance Manual including revisions, 40 CFR Parts 53 and 58 of the Code of Federal Regulations (CFR), and any other requirements specified by the Department.

8. BMP shall submit quarterly data reports within 45 days after the end of the calendar quarter and an annual data report within 90 days after the end of the calendar year. The annual report may be substituted for the fourth quarterly report if all information in 9 below is included in the report.

9. The quarterly report shall consist of a narrative data summary and a data submittal of all data points in AIRS format. This data shall be submitted on a 3 ½" diskette. The narrative data summary shall include:

    a. A topographic map of appropriate scale with UTM coordinates and a true north arrow showing the air monitoring site locations (identified by AIRS number) in relation to the mine and facilities and the general area

    b. A hard copy of the individual data points

    c. The quarterly and monthly means, per site, for PM_{10}

    d. The first and second highest 24-hour concentrations for PM_{10}

    e. A summary of the data collection efficiency

    f. A summary of the reasons for missing data

    g. Precision and accuracy (audit) data

    h. A summary of any ambient standard exceedances

    i. Calibration information

10. The annual data report shall consist of a narrative data summary containing:

    a. A topographic map of appropriate scale with UTM coordinates and a true north arrow showing the air monitoring site locations (identified by AIRS number) in relation to the mine and facilities and the general area

    b. A pollution trend analysis

    c. The annual means, per site, for PM_{10}

    d. The first and second highest 24-hour concentrations, per site, for PM_{10}

    e. An annual summary of data collection efficiency

    f. An annual summary of precision and accuracy (audit) data

g. An annual summary of any ambient standard exceedances

h. Recommendations for future monitoring

11. The Department may audit, or may require BMP to contract with an independent firm to audit, the air monitoring network, the laboratory performing associated analyses, and any data handling procedures at unspecified times. On the basis of the audits and subsequent reports, the Department may recommend or require changes in the air monitoring network and associated activities in order to improve precision, accuracy and data completeness.

Permit Analysis
BMP Investments Incorporated
Permit #3179-01

I. Introduction/Process Description

A. Permitted Equipment

BMP Investments Incorporated (BMP) is proposing to construct and operate an underground coal mining operation in the Bull Mountains near Roundup, Montana and approximately 35 miles north of Billings, Montana. The facility would contain reject piles, clean coal piles, an old coal preparation plant, a new coal preparation plant, a rail loadout, a waste disposal area (WDA), mine ventilation, mine yard area equipment, a quarry, a run-of-mine (ROM) stockpile, and various conveyors and transfer stations.

B. Source Description

BMP is proposing to construct an underground coal mine that would initially be capable of producing up to 1.3 million tons of raw coal per year. The initial phase of this project would cover the development stage of the operation. The initial development phase would allow for some production while the ultimate primary facilities are constructed. The primary facilities (new coal wash plant and on-site rail loadout) would support a production rate of up to 4.0 million tons of raw coal per year.

The operations at the facility can be classified into four categories: underground mining, coal handling and storage, coal cleaning, and waste disposal. Coal would be mined underground using continuous miner sections and longwall panels. The continuous miner would be used to establish a mineable block of coal, and the longwall equipment would be used to extract the block of coal. A conveyor belt would be used to transfer the ROM coal to a stockpile outside of the mine portal.

Surface material storage facilities would include stockpiles of ROM coal, clean coal, and reject material from the wash plant. Material would be moved from inside the mine to the ROM stockpile on a high capacity belt conveyor. Other conveyors would be used to transport coal from the ROM pile to the coal cleaning facility and from there to the clean coal piles. Coal would be supplied to local consumers from bins with hoppers located at the wash plant facilities. Reject material would be sent to the WDA.

During the development operations, the coal would be transferred from the ROM stockpile to the existing wash plant via a belt conveyor. The coal would pass through the buffer bin to a crusher and sizing screen and then on to the heavy media washer. The final product would be passed through a fluidized bed to air dry the product. A primary coal washing facility would be constructed concurrently with the development operations.

The development phase wash plant would reject 19 percent of the raw coal stream and the new primary facility would reject 13 percent of the raw coal stream. These coal processing wastes and other mine development wastes would be permanently disposed of in the WDA located 1.4 miles northeast of the wash plant. The mine plan calls for revegetation of this area after completion of the project and after the appropriate seed bed preparation.

C. Permit History

Permit #3179-00 was issued to BMP on May 10, 2002, for the project as described above located in Sections 12, 13, and 14, Township 6, North, Range 26, East, in Musselshell County, Montana.

D. Current Permit Action

On May 9, 2003, BMP submitted a request to delay the commencement of ambient air monitoring until the mine reaches a coal production level of 1.3 million tons during any rolling 12-month period. The current permit action is an administrative amendment to make that change and to update the rule citations in the permit. **Permit #3179-01** replaces Permit #3179-00.

E. Additional Information

Additional information, such as applicable rules and regulations, Best Available Control Technology (BACT)/Reasonably Available Control Technology (RACT) determinations, air quality impacts, and environmental assessments, is included in the analysis associated with each change to the permit.

II. Applicable Rules and Regulations

The following are partial explanations of some applicable rules and regulations that apply to the facility. The complete rules are stated in the Administrative Rules of Montana (ARM) and are available, upon request, from the Department of Environmental Quality (Department). Upon request, the Department will provide references for location of complete copies of all applicable rules and regulations or copies where appropriate.

A. ARM 17.8, Subchapter 1 – General Provisions, including but not limited to:

1. ARM 17.8.101 Definitions. This rule includes a list of applicable definitions used in this chapter, unless indicated otherwise in a specific subchapter.

2. ARM 17.8.105 Testing Requirements. Any person or persons responsible for the emission of any air contaminant into the outdoor atmosphere shall, upon written request of the Department, provide the facilities and necessary equipment (including instruments and sensing devices), and shall conduct tests, emission or ambient, for such periods of time as may be necessary using methods approved by the Department.

3. ARM 17.8.106 Source Testing Protocol. The requirements of this rule apply to any emission source testing conducted by the Department, any source or other entity as required by any rule in this chapter, or any permit or order issued pursuant to this chapter, or the provisions of the Clean Air Act of Montana, 75-2-101, *et seq*., Montana Code Annotated (MCA).

   BMP shall comply with the requirements contained in the Montana Source Test Protocol and Procedures Manual, including, but not limited, using the proper test methods and supplying the required reports. A copy of the Montana Source Test Protocol and Procedures Manual is available from the Department upon request.

4. ARM 17.8.110 Malfunctions. (2) The Department must be notified promptly by telephone whenever a malfunction occurs that can be expected to create emissions in excess of any applicable emission limitation or to continue for a period greater than 4 hours.

5. ARM 17.8.111 Circumvention. (1) No person shall cause or permit the installation or use of any device or any means that, without resulting in reduction of the total amount of air contaminant emitted, conceals or dilutes an emission of air contaminant that would otherwise violate an air pollution control regulation. (2) No equipment that may produce emissions shall be operated or maintained in such a manner as to create a public nuisance.

B. ARM 17.8, Subchapter 2 – Ambient Air Quality, including, but not limited to:

1. ARM 17.8.220 Ambient Air Quality Standard for Settled Particulate Matter
2. ARM 17.8.221 Ambient Air Quality Standard for Visibility
3. ARM 17.8.223 Ambient Air Quality Standard for PM_{10}

BMP must maintain compliance with the applicable ambient air quality standards.

C. ARM 17.8, Subchapter 3 – Emission Standards, including, but not limited to:

1. ARM 17.8.304 Visible Air Contaminants. This rule requires that no person may cause or authorize emissions to be discharged into the outdoor atmosphere from any source installed after November 23, 1968, that exhibit an opacity of 20% or greater averaged over 6 consecutive minutes.

2. ARM 17.8.308 Particulate Matter, Airborne. (1) This rule requires an opacity limitation of 20% for all fugitive emission sources and that reasonable precautions be taken to control emissions of airborne particulate matter. (2) Under this rule, BMP shall not cause or authorize the use of any street, road or parking lot without taking reasonable precautions to control emissions of airborne particulate matter.

3. ARM 17.8.309 Particulate Matter, Fuel Burning Equipment. This rule requires that no person shall cause, allow or permit to be discharged into the atmosphere particulate matter caused by the combustion of fuel in excess of the amount determined by this rule.

4. ARM 17.8.310 Particulate Matter, Industrial Process. This rule requires that no person shall cause, allow or permit to be discharged into the atmosphere particulate matter in excess of the amount set forth in this rule.

5. ARM 17.8.322 Sulfur Oxide Emissions--Sulfur in Fuel. This rule requires that no person shall burn liquid, solid or gaseous fuel in excess of the amount set forth in this rule.

6. ARM 17.8.340 Standard of Performance for New Stationary Sources and Emission Guidelines for Existing Sources. This rule incorporates, by reference, 40 CFR 60, Standards of Performance for New Stationary Sources (NSPS). BMP is considered an NSPS affected facility under 40 CFR 60 and is subject to the requirements of 40 CFR 60, Subpart Y, Standard of Performance for Coal Preparation Plants.

Subpart Y - Coal Preparation Plants - requires a particulate emission limitation of 0.04 grams per dry standard cubic meter, a 10 percent opacity limitation on pneumatic coal cleaning emissions, and an opacity limitation of 20 percent for coal processing, conveying, storage, and loading systems as described in Section II of the permit. The subpart also requires particulate and opacity limitations for thermal dryers. The coal dryer proposed for the development phase of the operation uses ambient air as opposed to a heated gas stream; therefore, that portion of the regulation is not applicable. If at some point, the permittee proposes to use a heated gas stream for coal drying, the Department must be notified in order to determine the monitoring and testing requirements with respect to NSPS applicability. The NSPS applicability for pneumatic coal cleaning and thermal dryers is specific to bituminous coal, while the other provisions apply to all classifications of coal. The applicant reported that the coal to be mined is classified as bituminous.

D. ARM 17.8, Subchapter 5 – Air Quality Permit Application, Operation and Open Burning Fees, including, but not limited to:

1. ARM 17.8.504 Air Quality Permit Application Fees. This section requires that an applicant submit an air quality permit application fee concurrent with the submittal of an air quality permit application. A permit application is incomplete until the proper application fee is paid to the Department. A permit application fee was not required for the current permit action because it is considered to be an administrative permit action.

2. ARM 17.8.505 When Permit Required--Exclusions. An annual air quality operation fee must, as a condition of continued operation, be submitted to the Department by each source of air contaminants holding an air quality permit (excluding an open burning permit) issued by the Department. The air quality operation fee is based on the actual or estimated actual amount of air pollutants emitted during the previous calendar year.

   An air quality operation fee is separate and distinct from an air quality permit application fee. The annual assessment and collection of the air quality operation fee, described above, shall take place on a calendar-year basis. The Department may insert into any final permit issued after the effective date of these rules, such conditions as may be necessary to require the payment of an air quality operation fee on a calendar-year basis, including provisions that prorate the required fee amount.

E. ARM 17.8, Subchapter 7 – Permit, Construction and Operation of Air Contaminant Sources, including, but not limited to:

1. ARM 17.8.740 Definitions. This rule is a list of applicable definitions used in this chapter, unless indicated otherwise in a specific subchapter.

2. ARM 17.8.743 Montana Air Quality Permits--When Required. This rule requires a facility to obtain an air quality permit or permit alteration if they construct, alter or use any air contaminant sources that have the potential to emit greater than 25 tons per year of any pollutant. BMP has the potential to emit more than 25 tons per year of PM_{10}; therefore, an air quality permit is required.

3. ARM 17.8.744 Montana Air Quality Permits--General Exclusions. This rule identifies the activities that are not subject to the Montana Air Quality Permit program.

4. ARM 17.8.745 Montana Air Quality Permits—Exclusion for De Minimis Changes. This rule identifies the de minimis changes at permitted facilities that are not subject to the Montana Air Quality Permit Program.

5. ARM 17.8.748 New or Modified Emitting Units--Permit Application Requirements. This rule requires that a permit application be submitted prior to installation, alteration or use of a source. BMP was not required to submit an application for the current permit action because it is an administrative action.

6. ARM 17.8.749 Conditions for Issuance or Denial of Permit. This rule requires that the permits issued by the Department must authorize the construction and operation of the facility or emitting unit subject to the conditions in the permit and the requirements of this subchapter. This rule also requires that the permit must contain any conditions necessary to assure compliance with the Federal Clean Air Act (FCAA), the Clean Air Act of Montana, and rules adopted under those acts.

7. ARM 17.8.752 Emission Control Requirements. This rule requires a source to install the maximum air pollution control capability that is technically practicable and economically feasible, except that BACT shall be utilized. A BACT review was not required for the current permit action because there are no new or modified sources permitted as part of this action.

8. ARM 17.8.755 Inspection of Permit. This rule requires that air quality permits shall be made available for inspection by the Department at the location of the source.

9. ARM 17.8.756 Compliance with Other Requirements. This rule states that nothing in the permit shall be construed as relieving BMP of the responsibility for complying with any applicable federal or Montana statute, rule, or standard, except as specifically provided in ARM 17.8.740, *et seq*.

10. ARM 17.8.759 Review of Applications. This rule describes the Department's responsibilities for processing permit applications and making permit decisions on those permit applications that do not require the preparation of an environmental impact statement.

11. ARM 17.8.762 Duration of Permit. An air quality permit shall be valid until revoked or modified, as provided in this subchapter, except that a permit issued prior to construction of a new or altered source may contain a condition providing that the permit will expire unless construction is commenced within the time specified in the permit, which in no event may be less than 1 year after the permit is issued.

12. ARM 17.8.763 Revocation of Permit. An air quality permit may be revoked upon written request of the permittee, or for violations of any requirement of the Clean Air Act of Montana, rules adopted under the Clean Air Act of Montana, the FCAA, rules adopted under the FCAA, or any applicable requirement contained in the Montana State Implementation Plan (SIP).

13. ARM 17.8.764 Administrative Amendment to Permit. An air quality permit may be amended for changes in any applicable rules and standards adopted by the Board of Environmental Review (Board) or changed conditions of operation at a source or stack that do not result in an increase of emissions as a result of those changed conditions. The owner or operator of a facility may not increase the facility's emissions beyond permit limits unless the increase meets the criteria in ARM 17.8.745 for a de minimis change not requiring a permit, or unless the owner or operator applies for and receives another permit in accordance with ARM 17.8.748, ARM 17.8.749, ARM 17.8.752, ARM 17.8.755, and ARM 17.8.756, and with all applicable requirements in ARM Title 17, Chapter 8, subchapters 8, 9, and 10.

14. ARM 17.8.765 Transfer of Permit. This rule states that an air quality permit may be transferred from one person to another if written notice of Intent to Transfer, including the names of the transferor and the transferee, is sent to the Department.

F. ARM 17.8, Subchapter 8 – Prevention of Significant Deterioration of Air Quality, including, but not limited to:

1. ARM 17.8.801 Definitions. This rule is a list of applicable definitions used in this subchapter.

2. ARM 17.8.818 Review of Major Stationary Sources and Major Modifications--Source Applicability and Exemptions. The requirements contained in ARM 17.8.819 through 17.8.827 shall apply to any major stationary source and any major modification, with respect to each pollutant subject to regulation under the Federal Clean Air Act (FCAA) that it would emit, except as this subchapter would otherwise allow.

This facility is not a major stationary source since this facility is not a listed source and the facility's potential to emit is below 250 tons per year of any pollutant (excluding fugitive emissions).

As part of the permit application process, the Department required BMP to provide information regarding the ownership relationship between the BMP Bull Mountain Mine #1 Project and the proposed Roundup Power Project.

BMP indicated that BMP is the lessee under a coal lease comprising the coal to be mined at the Bull Mountain Mine #1 coal mine. In addition, BMP has applied for the permit to mine the coal at the mine.

BMP further indicated that the Roundup Power Project will ultimately be owned by private, municipal, and cooperative utilities, and possibly industrial companies. None of these equity owners of the Roundup Power Project have any interest or ownership in BMP nor will they in the future. Currently Bull Mountain Development Company, No. 1, L.L.C., is engaged in the development of the Roundup Power Project. While Bull Mountain Development Company, No. 1, L.L.C., is currently involved in the development of the Roundup Power Project, it intends to transfer all rights it has in the project to the ultimate owners of the Roundup Power Project once those owners have been selected and have entered into appropriate contracts among themselves. BMP currently has no interest or ownership in the Roundup Power Project and it is not anticipated that BMP will, at any time, have any ownership interests or right to control the ultimate entity that will complete development of the Roundup Power Project and thereafter operate such project.

BMP does have a contractual agreement with Bull Mountain Development Company, No. 1, L.L.C., to supply coal and for ultimate ash disposal for the Roundup plant. This contract will be transferred from Bull Mountain Development Company, No. 1, L.L.C., to the plant owners upon completion of the owner's agreements.

Therefore, for the purpose of air permitting, the Department currently considers the Bull Mountain Mine #1 and the Roundup Power Project to be separate and distinct stationary sources as defined under New Source Review.

G. ARM 17.8, Subchapter 12 – Operating Permit Program Applicability, including, but not limited to:

1. ARM 17.8.1201 Definitions. (23) Major Source under Section 7412 of the FCAA is defined as any source having:

   a. Potential to Emit (PTE) > 100 tons/year of any pollutant;

   b. PTE > 10 tons/year of any one Hazardous Air Pollutant (HAP), PTE > 25 tons/year of a combination of all HAPs, or lesser quantity as the Department may establish by rule; or

   c. PTE > 70 tons/year of PM_{10} in a serious PM_{10} nonattainment area.

2. ARM 17.8.1204 Air Quality Operating Permit Program. (1) Title V of the FCAA amendments of 1990 requires that all sources, as defined in ARM 17.8.1204(1), obtain a Title V Operating Permit. In reviewing and issuing Air Quality Permit #3179-01 for BMP, the following conclusions were made.

   a. The facility's PTE is less than 100 tons/year for any pollutant (excluding fugitive emissions).

   b. The facility's PTE is less than 10 tons/year for any one HAP and less than 25 tons/year of all HAPs.

   c. This source is not located in a serious PM_{10} nonattainment area.

   d. This facility is subject to 40 CFR 60, Subpart Y.

   e. This facility is not subject to any current NESHAP standards.

   f. This source is not a Title IV affected source, nor a solid waste combustion unit.

   g. This source is not an EPA designated Title V source.

   Based on these facts, the Department determined that BMP will be a minor source of emissions as defined under Title V and BMP is not required to obtain a Title V Operating Permit. However, if minor sources subject to NSPS are required to obtain a Title V Operating Permit in the future, BMP will be required to obtain a Title V Operating Permit.

III. BACT Determination

A BACT determination is required for each new or altered source. BMP shall install on the new or altered source the maximum air pollution control capability, which is technically practicable and economically feasible, except that BACT shall be utilized. A BACT review was not required for this administrative amendment; however, the following BACT determination is included from the original permit.

BMP has applied for an air quality preconstruction permit to construct and operate an underground coal mine identical to a previously applied for and permitted (Permit #2743-00) operation by Meridian Minerals Company Bull Mountains Mine #1 (Meridian). BMP maintains that the BACT analysis contained in the original permit application for Meridian remains current and no further analysis is required. The original BACT analysis addresses some available methods of controlling particulate emissions from surface activities at the underground coal mining facility. The Department has reviewed these methods, as well as previous BACT determinations, in order to make the following BACT determination.

The following pollutants will be emitted as a result of the project:

Pollutant	Source
Particulates (PM/PM_{10}):	Fugitive emissions from mining activities, conveying, handling, and loadout of coal; handling, conveying, and disposal of reject/waste material; travel on unpaved roads; and blasting. Process emissions from coal crushing, screening, and pneumatic cleaning/drying. Emissions from coal and diesel fuel combustion.
Nitrogen Oxides (NO_X):	Fugitive emissions from blasting, diesel, gasoline, and coal combustion.
Carbon Monoxide (CO):	Fugitive emissions from blasting, diesel, gasoline, and coal combustion.
Sulfur Dioxide (SO_2):	Emissions from explosives and coal combustion.

PM/PM_{10} BACT Analysis

Units with applicable emissions for this BACT analysis include fugitive emissions of particulates from storage piles of coal and reject/waste material, outdoor conveyor belts and transfer points, coal handling and loadout, reject/waste material handling and disposal, and vehicle traffic on unpaved roads. Process particulate emissions result from coal wash plant processes including screening, crushing, material handling, drying, and pneumatic cleaning. In addition, the coal fired boiler, heavy-duty diesel equipment, and blasting activities contribute to particulate matter emissions.

Fugitive PM/PM_{10} Emissions

In general, fugitive emissions from open sources are controlled by preventative and/or mitigating measures/techniques. The sources of fugitive particulates may be classified according to the activities, which generate the emissions. The activity classes for the proposed project include: 1) wind erosion, 2) coal handling and transfer, 3) reject/waste material handling, transfer, and disposal, and 4) travel on unpaved roads.

Wind erosion affects both the storage piles and outdoor material handling/disposal activities. Preventative techniques reduce emissions by reducing the extent of the source, by modifying the process, or by adjusting work practices. Reduction of emissions of fugitive dust or particulate matter from wind erosion and material handling can be accomplished by enclosure, chemical stabilization, or material wetting. Chemical stabilization will not be considered because it has been deemed technically unfeasible for the proposed project due to the constant activity on the storage piles and because the chemicals used could become air pollutants as the coal is burned.

A significant concern with this operation is the potential for wind erosion from the ROM and clean coal stockpiles. Enclosure of the stockpiles (in barns or silos) was considered through the BACT analysis but was not determined to be technically feasible due to the constant material movement at the source and this type of control has not been required for recently permitted similar sources of particulate emissions. The Department will require that BMP apply surface moisture to the product either during mining activities, washing, or loadout operations and utilize contouring techniques to reduce potential for wind erosion.

The Department determined that the use of reasonable precautions, contouring, and watering, as necessary, to maintain compliance with the 20% opacity limitation will constitute BACT for the stockpiles.

Material handling for the purposes of this BACT analysis is broken down into two categories, coal product and reject/waste materials. Coal handling activities include drops to and from conveyors and stockpiles, movement of piles by bulldozer or front-end loader, and movement of material for transport by truck or rail. Reject/waste material handling activities include conveyor transfer, bin loading, truck loading and unloading, and material spreading.

The Department determined that BMP shall minimize the fall distance associated with all material handling activities to the greatest extent that is practically feasible. Further, BMP shall develop, implement, and maintain good housekeeping practices to keep coal and waste material transfer locations clean.

For particulates generated during loadout operations onto stockpiles, the Department determined that the use of fixed stackers with an underground reclaim system at the permanent facility and a radial stacker with an adjustable chute at the development facility constitutes BACT.
In addition, the Department determined that the use of enclosures for surface conveyors and incorporating flexible chutes and enclosures at all transfer points for the transport of coal and reject/waste material will constitute BACT. Further, based on similar source determinations, the Department also determined that fabric filter baghouses or fabric filter baghouse pick-up points at all surface conveyor material transfer points will constitute BACT. Also, during the primary phase of operations, BMP is required to load reject/waste material into an enclosed bin incorporating a hopper for truck loading. Further, BMP shall utilize water and/or chemical dust suppressant, as necessary, for the purpose of controlling emissions from the movement of materials by bulldozer or front-end loader. Also, BMP shall use watering and or chemical dust suppressants, contouring techniques, and eventually soil covering and re-vegetation for controlling particulate emissions from WDA operations.

Further, BMP must take reasonable precautions to limit the fugitive emissions of airborne particulate matter on haul roads, access roads, parking areas, and general plant property. BMP shall clean up all spilled material from roadways to further limit potential fugitive emissions. The Department determined that the use water spray and/or chemical dust suppressant, as necessary, to maintain compliance with the opacity and reasonable precautions limitations will constitute BACT for these sources.

In summary, the Department determined that good housekeeping practices, minimization of fall distance for material transfer operations, the application of moisture throughout the mining process, using stackers with a reclaim system for the primary phase of operations and a radial stacker with an adjustable chute for the development phase for pile forming, enclosures for all surface conveyors and conveyor transfer points incorporating fabric filter baghouses or pick-up points, and water spray and/or chemical dust suppressant, as necessary, to maintain compliance with permitted opacity requirements and reasonable precautions limitations constitutes BACT for these sources.

Process PM/PM_{10} Emissions

Particulate emissions generated by screening, crushing, and drying or pneumatic cleaning in the coal wash plant can be controlled by the use of fabric filters in baghouses, electrostatic precipitators (ESP), or venturi scrubbers. BMP proposed the use of a fabric filter baghouse to collect particulates generated during coal preparation for both the development and primary phases of the project. Based on similar source determinations and the fact that fabric filter baghouses provide relatively constant and reliable control for sources of this type, the Department determined that the use of this technology will constitute BACT for coal wash plant, screening, crushing, and drying or pneumatic cleaning operations.

NO_X BACT Analysis

Nitrogen oxides are generated by coal combustion for the heating of site facilities, combustion of diesel or gasoline fuels in heavy duty equipment, haul trucks and light duty trucks above and below ground, and blasting activities.

As proposed, the heating of facilities will result in negligible emissions of NO_X; therefore, the Department determined that the addition of any controls would be economically unfeasible. The boiler used for these purposes will combust a maximum of 10 tons per year of coal for the development phase and 300 tons per year for the primary phase.

No feasible control options are available for heavy-duty equipment operation. Further, the Mining Safety and Health Administration (MSHA) requires that below ground vehicles be equipped with scrubbers and that ventilation be sufficient to maintain NO_X exhaust levels at less than 0.0025 percent as NO_2 in haulways and work areas. Thus, even though underground mining NO_X emissions will be vented directly to the atmosphere, the Department determined that these emissions would be negligible and any additional control requirements would be economically unfeasible.

Finally, there are no feasible control options available for blasting operations. The Department determined that proper operation and maintenance of on site sources of NO_X will constitute BACT for these sources.

CO BACT Analysis

Carbon Monoxide is generated by coal combustion for the heating of site facilities, combustion of diesel or gasoline fuels in heavy duty equipment, haul trucks and light duty trucks above and below ground, and blasting activities.

As proposed, the heating of facilities will result in negligible emissions of CO; therefore, the Department determined that the addition of any controls would be economically unfeasible. The boiler used for these purposes will combust a maximum of 10 tons per year of coal for the development phase and 300 tons per year for the primary phase.

No feasible control options are available for heavy duty equipment operation. Further, MSHA requires that below ground vehicles be equipped with scrubbers and that ventilation be sufficient to maintain CO exhaust levels at less than 0.010 percent in haulways and work areas. Thus, even though underground mining CO emissions will be vented directly to the atmosphere, the Department determined that these emissions would be negligible and any additional control requirements would be economically unfeasible.

Finally, there are no feasible control options available for blasting operations. The Department determined that proper operation and maintenance of on site sources of CO will constitute BACT for these sources.

SO_2 BACT Analysis

Sulfur dioxide is generated by coal combustion for the heating of site facilities. As proposed, the heating of facilities will result in negligible emissions of SO_2; therefore, addition of any controls would be economically unfeasible. The boiler used for these purposes will combust a maximum of 10 tons per year of coal for the development phase and 300 tons per year for the primary phase. The Department determined that proper operation and maintenance of on site sources of SO_2 will constitute BACT for these sources.

The control options selected facility-wide, have controls and control costs comparable to other recently permitted similar sources and are capable of achieving the appropriate emission standards.

IV. Emission Inventory

Table 1 lists the estimated PM-10 emissions for the primary phase of the project, including emission control practices and equipment to be used. Peak and annual emissions on both an uncontrolled and a controlled basis are included. Peak emission rates are based on peak production rates or hours of equipment operation. Peak coal production through the preparation plant has been proposed at 25,000 tons per day. The annual emission rates are based on average production rates and annual operating hours. The annual coal production rate has been proposed at 4 million tons. The application also contains a complete emission inventory for the development phase operations. Peak and annual coal production rates for the development phase have been proposed at 4000 tons per day and 1.3 million tons per year, respectively.

The emission control measures shown in Table 1 and in the application have been deemed to represent BACT for this project. A detailed BACT analysis is contained in Section III of the permit analysis.

TABLE 1
Primary Phase PM-10 Emissions

Activity	Control Technology	Control %	Peak Uncontrolled (lb/day)	Peak Controlled (lb/day)	Average Uncontrolled (ton/yr)	Average Controlled (ton/yr)
New Preparation Plant						
Drop	gravity feed	80	4.40	0.879	0.354	0.0704
crushing & screening	baghouse	99.9	1.713	0.002	274.000	0.2740
air classifiers	baghouse	99.9	241.667	0.242	38666.667	38.6667
drop to local distribution	gravity feed	80	0.053	0.011	0.002	0.0004
loadout for local	gravity feed	80	0.053	0.011	0.002	0.0004
drop to reject	gravity feed	80	0.485	0.097	0.039	0.0078
loadout for reject	gravity feed	80	0.485	0.097	0.039	0.0078
TOTAL			248.851	1.338	38941.100	39.027
New Clean Coal Stockpile						
drop to pile	fixed stacker	85	3.773	0.566	0.304	0.0456
reclaim drop	gravity feed	80	3.773	0.755	0.304	0.0609
one bulldozer			4.139	4.139	0.491	0.4912
one bulldozer			4.139	4.139	0.491	0.4912
clean coal pile one wind erosion			95.494	95.494	0.283	0.2834
clean coal pile two wind erosion			95.494	95.494	0.283	0.2834
TOTAL			206.812	200.586	2.158	1.656
Rail Loadout						
drop to bin	gravity feed	80	3.773	0.755	0.304	0.061
drop to car	gravity feed	80	3.773	0.755	0.304	0.061
TOTAL			7.546	1.509	0.609	0.122
Waste Disposal Area						
unload truck	gravity feed	80	0.485	0.097	0.039	0.008
bulldozing			6.381	6.381	1.085	1.085
loader			0.485	0.485	0.039	0.039
wind erosion	compaction	90	67.927	6.793	0.071	0.007
scraper	wet material	50	190.694	95.347	32.418	16.209
TOTAL			265.971	109.102	33.651	17.347
Mine Ventilation						
trucks etc.			0.202	0.202	0.034	0.034
below ground blasting			16.640	16.640	0.100	0.100
TOTAL			16.842	33.685	16.977	0.268
ROM Stockpile						
Load into pile	fixed stacker	85	4.397	0.660	0.352	0.053
Reclaim drop	gravity feed	80	4.397	0.879	0.352	0.070
Loader			4.397	4.397	0.352	0.352
Bulldozing			4.139	4.139	0.250	0.250
Wind erosion			78.272	78.272	0.232	0.232
TOTAL			95.602	88.347	1.538	0.958

Activity	Control Technology	Control %	Peak Uncontrolled (lb/day)	Peak Controlled (lb/day)	Average Uncontrolled (ton/yr)	Average Controlled (ton/yr)
Office						
Combustion			0.982	0.982	0.135	0.135
TOTAL			0.982	0.982	0.135	0.135
Quarry						
Surface blasting			203.752	203.752	0.204	0.204
TOTAL			203.752	203.752	0.204	0.204
Shop						
Forklift			12.229	12.229	2.079	2.079
TOTAL			12.229	12.229	2.079	2.079
Mine Yard Area One						
Backhoe	Watering	85	12.229	1.834	2.079	0.312
Forklift	Watering	85	12.229	1.834	2.079	0.312
Loader	Watering	85	30.573	4.586	5.197	0.780
Trucks	Watering	85	412.734	61.910	70.165	10.525
Bob cat	Watering	85	55.031	8.255	9.355	1.403
TOTAL			522.796	78.419	88.875	13.331
Mine Yard Area Two						
Backhoe	Watering	85	12.229	1.834	2.079	0.312
Forklift	Watering	85	12.229	1.834	2.079	0.312
Loader	Watering	85	30.573	4.586	5.197	0.780
Trucks	Watering	85	412.734	61.910	70.165	10.525
Bob cat	Watering	85	55.031	8.255	9.355	1.403
TOTAL			522.796	78.419	88.875	13.331
Conveyors						
Portal to ROM stockpile	enclosure	85	2.500	0.375	0.200	0.030
ROM prep plant	enclosure	85	2.500	0.375	0.200	0.030
Prep plant to clean coal	enclosure	85	2.145	0.322	0.173	0.026
clean coal pile to rail	enclosure	85	2.145	0.322	0.173	0.026
TOTAL			9.290	1.394	0.746	0.112
Unpaved Roads						
Worker traffic	Watering	85	91.712	13.757	15.591	2.339
grader	Watering	85	22.950	3.443	3.902	0.585
water truck	Watering	85	10.386	1.558	1.766	0.265
tractor low boy	Watering	85	8.059	1.209	96.708	14.506
haul to WDA	Watering	85	738.731	110.810	59.099	8.865
TOTAL			871.838	130.776	177.065	26.560
GRAND TOTAL			2985.3	940.5	39354.0	115.1

Table 2 lists the estimated gaseous emissions for the primary phase of the operation. The application for air quality permit for Meridian Minerals Company Bull Mountain Mine #1 contains a detailed breakdown of specific sources for these emissions as well as the development phase emissions.

TABLE 2 Primary Phase Gaseous Pollutant Emissions	
Pollutant	Potential to Emit (tons/year)
Nitrogen Oxides	3.6
Carbon Monoxide	10.7
Sulfur Dioxide	0.3

V. Existing Air Quality

Meridian Minerals Company monitored baseline air quality (particulate) in the project area. The measurements included both TSP (total suspended particulate) and PM-10 (particulate matter less than 10 microns in diameter).

The period of record submitted with the application is from March 1989 through March 1992. All values are well below applicable ambient air quality standards. The following table summarizes the data. (Values are reported in micrograms per cubic meter.)

Year	Parameter	24-Hour High Reading	24-Hour Second Highest	Annual Average	No. of Samples
1989	TSP PM-10	39 53*	33 19	14 9	51 51
1990	TSP PM-10	59 29	58 27	13 9	59 57
1991	TSP PM-10	42 24	39 21	14 9	56 57
*This high PM-10 value was recorded on June 27; no TSP value was recorded on that date.					

The state and federal PM-10 standards are as follows:

Annual Average = 50 $\mu g/m^3$
24-hour = 150 $\mu g/m^3$

Meteorological data was collected at the site as well. The predominant wind direction is from the northwest. In the immediate plant area the predominant wind is up the P.M. draw. There is also a significant southeasterly component down the draw.

Current local sources of air pollution in the area include vehicle traffic (unpaved roads), the PM Mine, agricultural activities, and home heating. Operational air monitoring requirements for the project are contained in Attachment 1.

VI. Ambient Air Impact Analysis

Project Summary

The proposed project will include two phases: the development phase and the primary phase. During the development phase of the operation, BMP proposes to initially mine at a rate of 1.3 million tons of raw coal per year. The initial development phase will allow for some production

while the primary phase facilities are constructed. These primary facilities include a new coal wash plant and an onsite rail loadout, which will support production of up to 4 million tons of coal per year.

The BMP mine design is identical to the previous permitted site by Mountain Inc., which previously held Permit #2743-02 issued on May 23, 1997. The Department later revoked this permit. The estimated emissions from the project are 3.6 tons per year (tpy) of oxides of nitrogen (NO_X), 10.7 tpy of carbon monoxide (CO), 115.1 tpy of Particulate Matter less than 10 microns (PM_{10}), and 0.3 tpy of Sulfur dioxide (SO_2).

The air quality classification for Musselshell County is "Unclassifiable or Attainment" for all pollutants (40 CFR 81.327).

Review of Modeling Analysis

Application #3179-01 did not include an update to the Air Quality Analysis. GeoResearch Inc. performed an air quality impact analysis for this project for the initial application submitted by Meridian Minerals Company on January 16, 1991, and GeoResearch performed a second analysis for the Addendum dated February 25, 1992, that was submitted to the Department on March 5, 1992. The analysis used the EPA Industrial Source Complex Model (ISCST and ISCLT) to estimate the impacts of the particulates, NO_X, SO_2, and CO. The 1992 results showed that predicted ambient impacts for this facility would not cause or contribute to a violation of any state or federal air quality standard.

Since 1992 the ISC model has undergone several major changes and revisions, which included significant updates to the algorithms for volume and area sources. Historically, the ISC model predicted higher results for volume and area sources than would the ISC3 model of today. There are only two point sources at the mine, which account for about one percent of the total emissions from the proposed project; the rest of the modeled sources are volume and area sources. Thus, the modeling conducted for this project in 1992 predicts compliance with the ambient air quality standards and would be conservative for the BMP project.

The MDMB performed an analysis based on the information available from the 1992 submittal and concluded that the modeled results would be similar or less than those previously modeled using ISC3 and would not cause or contribute to a violation of any state or federal air quality standards.

The meteorological data set used in the dispersion modeling was 5 years of National Weather Service surface data from Billings, Montana, combined with upper air data from Great Falls, Montana. Receptors were modeled over a 10 kilometer square area centered on the proposed mine. Receptors were spaced at 100 meter intervals along the permit boundary and around "hot spot" receptors. Receptors near the plant were spaced at 500 meter intervals and the distant receptors were spaced at 1000 meters.

The emissions were modeled for the two different production scenarios, the development phase and the primary phase, after all of the construction was complete. Separate emission scenarios were also used for the 24-hour maximum production rate and the annual production rate.

Ambient impacts predicted for this facility are as follows: The maximum predicted 24-hour PM_{10} impact from all of the scenarios and receptors modeled was 112 $\mu g/m^3$, which when added to the on-site background value of 29 $\mu g/m^3$ results in a predicted maximum 24-hour value of 141

$\mu g/m^3$, well below the 24 hour standard of 150 $\mu g/m^3$. The maximum predicted annual PM_{10} impact from all scenarios and receptors modeled was 34.5 $\mu g/m^3$, which when added to the local background value of 9 $\mu g/m^3$ totals 43.5 $\mu g/m^3$, well below the annual standard of 50 $\mu g/m^3$. The annual maximum noted above was for the Development phase scenario and is predicted to decrease by about 50% after the first year construction is finished (primary phase). Modeled results for NO_X, CO, and SO_2 were generally below significance levels and are of no consequence.

VII. Taking or Damaging Implication Analysis

As required by 2-10-105, MCA, the Department conducted a private property taking and damaging assessment and determined there are no taking or damaging implications.

VIII. Environmental Assessment

An environmental assessment was not required for the current permit action because it is considered an administrative permit action.

Permit Analysis Prepared by: Pat Driscoll
Date: May 28, 2003